

Root Cause Analysis (RCA)

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Definition of Root Cause Analysis:

An RCA is distinct from incident or problem resolution. Various definitions are available, but these three seem most appropriate:

- An Activity that defines the underlying or original cause of an Incident or Problem. (OGC: ITIL Service Operation)
- A technique used to identify the conditions that initiate the occurrence of an undesired activity or state. (<http://www.gao.gov/special.pubs/bprag/bprgloss.htm>)
- A process improvement and error or defect prevention tool that examines the individual processes within a system, identifies the control or decision points, and uses a series of why? questions to determine the reasons for variations in the process paths. (<http://www.bridgefieldgroup.com/bridgefieldgroup/glos8.htm>)

Why:

- To identify and determine the cause of underlying failures that lead to significant service degradation or outages
- To identify and determine the cause of recurring problems that are indicative of short-sighted solutions or lack of sufficient cross-group communication
- To bring resources to the solution of root cause issues

When:

- In case of a major incident without a known cause (following a reasonable period of investigation), or
- In case of a major incident where the discovered explanation indicates a potential for more incidents, or
- When the view is that a recurring problem has the potential for causing future major incidents but is not being adequately addressed, or
- When there is recognition of an underlying problem resulting in otherwise disparate incidents,

AND

- When agreed upon by more than one person in quadrant and department leadership, or
- When requested by a major stakeholder.

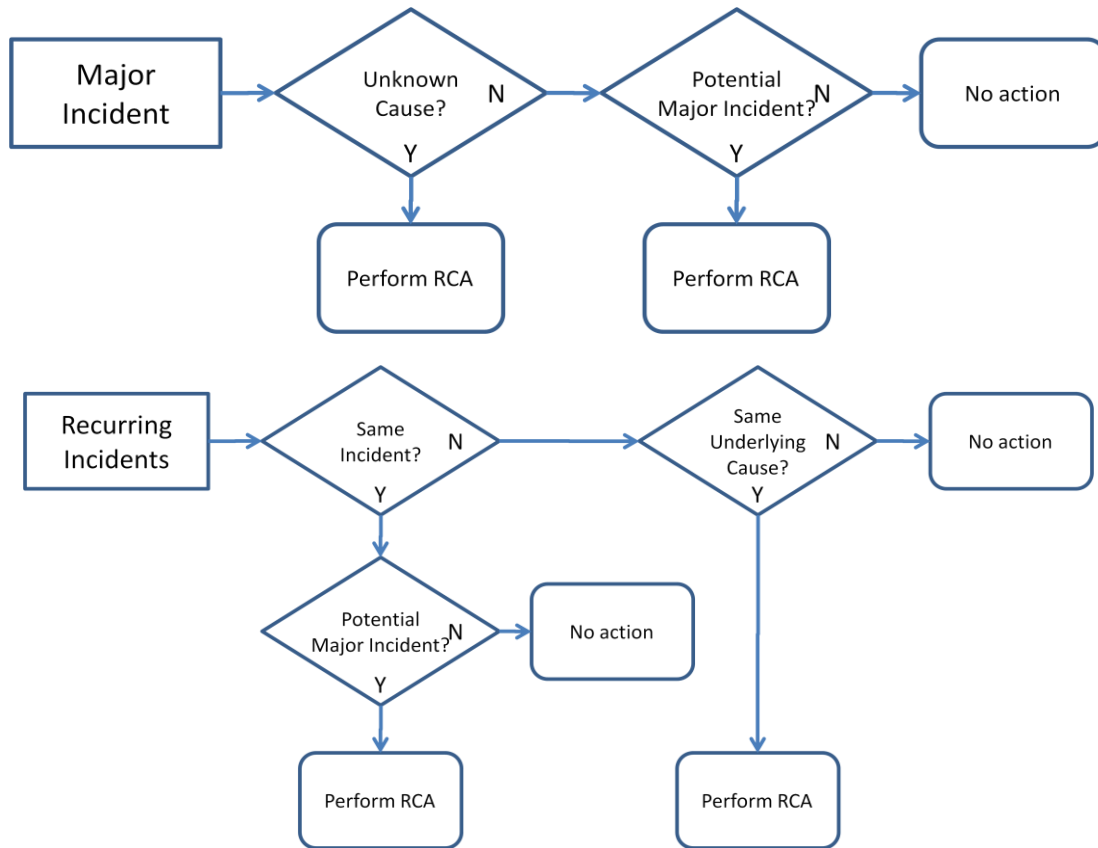
The expectation is that there will be a small number of RCAs necessary per year for the quadrant.

How:

- The quadrant head, deputy, or delegate shall draft an RCA charge, including recommendations for:
 - RCA lead
 - RCA membership, to include topic expert, service stakeholder, individuals significant to any incidents, and department level management relevant to the topic
 - timescale for RCA report
- The RCA team shall follow "Kepner and Tregoe" method of problem analysis:
 - Define the problem
 - Describe the problem in terms of identity, location, time, and service impact
 - Establish possible causes
 - Test the most probable cause (either actual or gedanken experiment)
 - Verify the true cause
- The RCA lead investigator shall produce a succinct RCA memo to:
 - Give a concise description of the initiating incident(s)
 - Summarize the analysis steps
 - Describe the desired change
 - Propose a course of action and schedule
 - Note the consequences of inaction or alternative workarounds
- The RCA report shall be sent to quadrant and department leadership and involved parties as appropriate.
- The RCA report shall be published (DocDB). Personnel, vendor sensitive or similar issues may be inappropriate for DocDB; such references should be expunged from the published version.
- Outstanding RCAs and associated action items shall be reviewed during quadrant/department meetings.

Process Flow Charts:

Decision Process:



RCA Process:

